

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 36-53 without prejudice.

LISTING OF CLAIMS:

1. (Previously Presented) A thermoplastic resin injection molding machine comprising:
 - a plasticating unit for plasticating a thermoplastic resin,
 - an injecting unit connected to the plasticating unit through a connecting passage, to inject the plasticated resin into a mold,
 - a buffering unit having a buffering chamber having a volume at least equal to the injection quantity of the resin per shot, said buffering unit receiving the resin plasticated in the plasticating unit during an injection by the injection unit, and said buffering unit feeding a measured amount of the resin held in the buffering chamber into the injecting unit after injection by the injection unit,
 - a plunger reciprocatably in said buffering unit, and
 - a detecting sensor detecting a position of the plunger.

2. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 1, in which said buffering unit comprises a pot, the plunger disposed in the pot applicable to be moved forward and backward in the pot, the buffering chamber

provided between the pot and the plunger for reserving the plasticated resin, and means for energizing the plunger in the resin extrusion direction.

3. (Canceled)

4. (Previously Presented) A thermoplastic resin injecting molding machine as claimed in claim 2, in which the energizing means comprises a spring.

5. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 2, in which the energizing means comprises a fluid-pressure cylinder.

6. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 2, in which the energizing means comprises an electric actuator.

7. (Original) A thermoplastic resin injection molding machine as claimed in claim 5, in which a constant fluid pressure from a fluid pressure source is transmitted to the fluid-pressure cylinder.

Claims 8-34 (Canceled)

35. (Previously Presented) A thermoplastic resin injection molding machine according to Claim 1, wherein said plunger connecting a piston rod, and said detecting sensor detecting a measurement of the piston rod.

Claims 36-53 (Canceled)

54. (Previously Presented) A thermoplastic resin injection molding machine comprising:

a plasticating unit for plasticating a thermoplastic resin,
an injecting unit connected to the plasticating unit through a connecting passage to inject the plasticated resin into a mold,
a buffering unit having a buffering chamber having a volume at least equal to the injection quantity of the resin per shot, said buffering unit receiving the resin plasticated in the plasticating unit during an injection by the injection unit, and said buffering unit feeding a measured amount of the resin held in the buffering chamber into the injecting unit after injection by the injection unit, the buffering chamber provided in said plasticating unit, and
a pressure sensor detecting a pressure in said buffering chamber wherein resin pressure is controlled to be constant in the buffering chamber based upon detected pressure.

55. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 54, in which said buffering unit is contained in said plasticating unit, and

further comprising a plunger disposed to be moved forward and backward, and means for energizing the plunger in the resin extrusion direction.

56. (Previously Presented) A thermoplastic resin injecting molding machine as claimed in claim 55, in which the energizing means comprises a spring.

57. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 55, in which the energizing means comprises a fluid-pressure cylinder.

58. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 55, in which the energizing means comprises an electric actuator.

59. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 57, in which a constant fluid pressure from a fluid pressure source is transmitted to the fluid-pressure cylinder.

60. (Previously Presented) A thermoplastic resin injection molding machine comprising:

 a plasticating unit for plasticating a thermoplastic resin,
 an injecting unit connected to the plasticating unit through a connecting passage to inject the plasticated resin into a mold,

a buffering unit having a buffering chamber and receiving the resin plasticated in the plasticating unit,

wherein the buffering unit is contained in the plasticating unit and is located in a longitudinal direction of the plasticating unit.

61. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 60, wherein the buffering unit receiving the resin plasticated in the plasticating unit during an injection by the injection unit.

62. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 60, further comprising:

a screw contained in the plasticating unit, and

a position detecting sensor detecting a change in position of the screw.

63. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 62, wherein the screw is disposed to be moved forward and backward, and means for energizing the screw in the resin extrusion direction.

64. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 63, in which the energizing means comprises a spring.

65. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 63, in which the energizing means comprises a fluid-pressure cylinder.

66. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 63, in which the energizing means comprises an electric actuator.

67. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 60, further comprising a reciprocating screw provided in said plasticating unit, a position detecting sensor detecting a position of said reciprocating screw to control an amount of resin input to the buffering unit and a pressure sensor detecting a pressure in said buffering unit.

68. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 60, further comprising a screw contained in the plasticating unit, and a pressure detecting sensor detecting a pressure in said buffering unit.

69. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 68, wherein the screw is disposed to be moved forward and backward, and means for energizing the screw in the resin extrusion direction.

70. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 63, further comprising a screw driving motor for rotating the screw,

wherein the screw and rotary shaft of the screw driving motor are separated from each other.

71. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 68, in which the energizing means comprises a spring.

72. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 68, in which the energizing means comprises a fluid-pressure cylinder.

73. (Previously Presented) A thermoplastic resin injection molding machine as claimed in claim 68, in which the energizing means comprises an electric actuator.